treatment effectiveness, recurrence rates, mortality rates, and costs. **RESULTS:** In the general population 5% -20% of adults are estimated to be asymptomatic carriers of CDI but up to 80% of the elderly in LTCF are colonized. Over 50% of cases are associated with hospitals and LTCFs. Growing number of cases have onset in the community. 9% of patients over 65 experience severe episodes compared to 4% for those below 65. Mortality rates for elderly are much higher. Patients over 65 experience almost twice the recurrence rate (38%), compared with younger populations (18% -22%). The rates for a second recurrence are 38% for those 65+ versus 24% below 65. The probability of recurrent CDI increases with the number of recurrences experienced. Recurrences were associated with major increases in hospital LOS and in costs. **CONCLUSIONS:** Our age-specific model allows to project and to quantify the impact of a CDI outbreak in terms of clinical burden and costs. Using a scenario-based approach, comparisons of current treatments with the novel approach of duodenal infusion (fecal transplant) are carried out.

PIN91

TWO-DOSE INFLUENZA VACCINATION COVERAGE AMONG UNITED STATES CHILDREN, 2008-2011

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BACKGROUND: Children 6 months through 18 years of age are consistently identified as a high-risk population for influenza infections. Since 2007, the Advisory Committee on Immunization Practices (ACIP) emphasized children aged 6 months to <9 years receive two doses of influenza vaccine in a season. Poor compliance with this two-dose regimen has been described in recent years. However, since ACIPs two-dose recommendation in 2007, predictors of two-dose compliance have not been assessed using population-based data. **OBJECTIVES:** This study analyzed data from influenza seasons 2008-2011 to examine two-dose compliance for children aged 19-35 months. This analysis tests for significant demographic and socioeconomic differences in one- and two-dose influenza vaccinations. **METHODS:** Seasonal influenza vaccinations of children were estimated from the National Immunization Survey (NIS). The analysis results were nationally representative by weighting the study population according to survey weights and cluster variables. Primary outcome measures were at least one dose and two doses of influenza vaccination during September 1 through December 31 of the season. For each season, the proportion of children with partial and full influenza vaccinations were calculated. Multivariate regressions modeled the effect of multiple NIS factors (i.e., age, race, gender) on influenza vaccination. **RESULTS:** For all four seasons, adjusted one-dose influenza vaccination was significantly lower among children 24-35 months compared to children 19-23 months (ranging from 7.8-44.5%, $p<0.05$). Furthermore, one- and two-dose influenza vaccination was lowest among children living below the poverty level compared to children living above the poverty level (ranging from 9.4-53.7%, $p<0.05$). **CONCLUSIONS:** Policies to improve one- and two-dose influenza vaccination rates should target children living below the poverty level. Efforts to improve one-dose vaccination rates among older infant children should continue. Further studies are needed to determine the reasons for initiating influenza vaccinations among children less than 24 months of age.

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UNWARRANTED USE OF BROAD-SPECTRUM ANTIBIOTICS

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OBJECTIVES: This study aimed to evaluate if high antibiotic consumption is explained by inappropriate prescribing, given current practice guidelines. This is assessed through measuring the proportion of Upper Respiratory Tract Infection (URTI) treated by GPs with Co-amoxiclav, and Urinary Tract Infection (UTI) treated with fluoroquinolones, comparing across population subgroups for differential treatment patterns. **METHODS:** This cohort study included records of all Clalit members visiting physicians from 4300 clinical practices during 2011. Rule-based algorithms were used to classify multiple primary care visits into discrete URTI and UTI events and link these with Ab prescriptions and dispensing. Infectious events and antibiotic prescription rates were calculated. Differences in distributions across districts and population subgroups were then tested with Chi-square analysis; for prescribing ratios for UTI the ratio for prescribing fluoroquinolones vs. Nitrofurantoin (narrow-range Ab of choice) were calculated. **RESULTS:** 6.5 million visits for infectious diagnoses were registered for all 4 million enrollees. Almost 75% of the Co-amixiclav dispensed was used for treatment of URTI, with 6% of URTI events treated with Co-amoxiclav. Over 75% of fluoroquinolones dispensed were used to treat UTI, with 23% of UTI events treated with fluoroquinolones. Variability between districts in the use of Co-amoxiclav for URTI ranged between 12%-23% in adults and 5%-21% in children. Twenty percent of physicians were co-amoxiclav "prescribers" with high rates of URTI events treated with co-amoxiclav (10%-38%). Treatment of UTI events with Quinolons varied considerably between 19%-52%. The proportion of Quinolons\Nitrofurantoin prescribed ranged between 1.4 (1.3-1.5) to 6.2 (5.5-6.8) in each district. **CONCLUSIONS:** Rates of utilizing broad-spectrum antibiotics in the community are higher than expected and show wide variability across country districts and between physicians This suggests the need for introducing this as a quality measure and implementing targeted interventions to reduce inappropriate antibiotic use.

PIN94

EVALUATION OF INJECTABLE FOSFOMYCIN USE IN A MEDICAL CENTER

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OBJECTIVES: To evaluate efficacy, safety (concerning hypernatremia), and usage of UFO® in a medical center **METHODS:** A retrospective medical record review was conducted for patients who is treated with UFO® in Wan-fang hospital during 2012/5/1 to 7/8. Patients with cancers were excluded. Patients with suspected or diagnosed infections and more than one dose of UFO® were included. For hypernatremia analysis, only included patients with serum sodium level and no hypernatremia events prior UFO use. Microsoft excels and student t-test were utilized for analyzing data and p-values **RESULTS:** Thirty-eight patients were included and the common infection types are pneumonia (N=13); UTI (N=12); cellutitis (N=9) and sepsis (N=9). The common pathogens are *Staphylococci* (19%) and *Pseudomona* species (21%). Twenty-one percent of cases used UFO® as empirical or first-line therapy. Combination therapies with cephalosporins (26%) or penicillins (24%) were more frequent. In cephalosporins combinination therapy, the most combined antibiotics are 3th cephalosporins (75%). In penicillins combinination therapy, the most combined antibiotics is oxacillin (40%). Mean treatment duration of UFO is 9.4 days. There were 71% cases using common dose of UFO®, 8-12 g/day, and 29% using low dose, 4-6 g/day. In patients with UFO®, 74% had negative outcomes (defined as patient died, hypernatremia events and changed to other antibiotics) and 26% had positive outcomes (defined as patients discharged, disease improved and no recurrent fever). Most patients developed hypernatremia (serum sodium level >145 mEq/L) after using UFO® for 4-6 days; patients with creatinine clearance above 50 ml/min did not develop hypernatremia. **CONCLUSIONS:** The serum sodium level didn't increase significantly until day 4-6 after starting UFO®. For patients with higher baseline serum sodium level and renal dysfunction, sodium level should be monitored closely while using UFO®. Using UFO® as adjunct for first line or empiric treatments is lack of evidence. Further antibiotic prescribing regulations should be implemented concerning prescribing UFO®.

PIN95

ANTIMALARIAL DRUGS USE PATTERN IN RETAIL OUTLETS IN ENUGU URBAN SOUTH EAST NIGERIA; IMPLICATION FOR MALARIA TREATMENT POLICY

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OBJECTIVES: Drugs retail outlets constitute a major source of malaria treatment in developing countries requiring regular and accurate information for enhancing strategies for improving the use of Artemisinin-based Combination Therapy (ACT). The study analyzed the demand and sales pattern of antimalarial drugs in private retail outlets to assess the current state of compliance to policy. **METHODS:** A prospective cross-sectional survey of randomly selected drugs retail outlets in Enugu urban, south east Nigeria, was conducted between May and August, 2013, to determine the types, range, prices and sales pattern of antimalarial drugs as well as concomitant medications, from pharmacies and patent medicine outlets. Data was collected and analysed for antimalarial drugs demanded for and sold by self-medication, treatment by retail outlets and prescription from hospitals. **RESULTS:** With a total of 1,321 dispensed antimalarial drugs, ACTs accounted for 72.7% while monotherapy was 27.3%. AMFm drugs contributed 32.7% (n = 314) of ACTs. 46.5% (614) of the drugs were dispensed from self-treatment by patients. Treatment by the retail outlets accounted for 35.8% (n = 473) while 17.7% of the drugs were dispensed from hospital prescriptions. The median cost of the ACTs, at $3.23 is about three times the median cost of monotherapy ($0.97). Total cost of treatment, including concomitant medications averaged $3.34 (±$1.90). The AL brand was the most used ACT, at 69.3% (n =666). Self-medication accounted for the highest number of monotherapy at 82% **CONCLUSIONS:** The use of ACTs as predominant antimalarial drugs of choice has become widespread in the retail outlets, with significant contributions from AMFm drugs. This portends positive implications on the implementation of antimalarial drugs policy. However costs of policy recommended drugs remain higher than intended and the use of monotherapy particularly through self-medication is significant suggesting additional measures to directly target consumers for improved use of antimalarial drugs.

PIN96

REAL WORLD DRUG UTILIZATION OF HIV THERAPIES IN CANADA

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OBJECTIVES: To describe current utilization of HIV drugs in Canada. **METHODS:** Longitudinal pharmacy retail data were obtained from most Canadian provinces. Eligible patients received their first HIV drug prescription during the selection period, and consistently filled subsequent prescriptions at the same pharmacy. Selection periods included an early cohort (initiating therapy January 2008 to July 2009) and a late cohort (initiating therapy August 2010 to February 2012). The observation period was 43 months for the early cohort and 12 months for the late cohort. **RESULTS:** 905 patients in the early cohort and 1,411 patients in the late cohort were analysed. Single-tablet regimens were the initial therapy for 32% of patients (early cohort) and 33% (late cohort). The most commonly used regimen was a backbone + protease inhibitor (PI): 45% of total days on therapy (DOT) for early cohort, 39% for late. Darunavir was increasingly chosen as the initial PI (3% patients for early cohort, 16% for late). Backbone plus integrase inhibitor (II) increased from 2% DOT (early cohort) to 11% in the late cohort. The majority of II patients were treatment-naïve (71%) in the late cohort, despite funding limitation to treatment-experienced patients in most jurisdictions. After 3 years of follow-up in the early cohort, 45% were still on their first therapy. For early-cohort patients who switched to a second therapy, 33% did so within 3 months. Subsequent lines of therapy phased in more gradually in both cohorts. Darunavir and II use increased in later lines of therapy for both cohorts, but particularly for the late cohort. **CONCLUSIONS:** This research documented changing patterns for HIV drug use in Canada, with increasing use of darunavir and II over time (irrespective of funding restrictions) and frequent early therapy switches suggestive of tolerability issues.

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PHARMACIST VACCINATION PROGRAMS FOR COMMON INFECTIOUS DISEASES: A SYSTEMATIC REVIEW OF THE LITERATURE ON THIS EMERGING MODEL OF CARE

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